

ICEBREAKER

TASMANIA'S ANTARCTIC BUSINESS MAGAZINE

No. 31 June 2005

Tasmania's Midwinter Cheer

Antarctic Festival activities this month

Flying South at last

Persistent lobbying for funds pay off

Southern Ocean focus

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North and South

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Please note: other than participating Huskies, no dogs are allowed in the Gardens, so please leave Fido at home.

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The Royal Tasmanian Botanical Gardens, Queens Domain, Hobart

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Cover picture: Midwinter Festival features – giant penguins and huskies. [Photo: Antarctic Tasmania]

Back page: Postcards showing recent Antarctic activities. [provided by Klaus Arne Pedersen]

EDITORIAL

• After many years of lobbying the Federal Government for funding to complete the airlink between Hobart and Casey Base, \$46 million over 4 years was allocated for this project in last month's Budget. Congratulations to all Tasmanian Polar Network members who persisted with the funding campaign, and as plans are already in place, the airlink should be operational by the end of the 2006-2007 summer season - only a year and a half to go!

• The range of activities for the Midwinter Festival is even more diverse this year, and it is encouraging to see more sponsors and new events linking their names to the festival. While many events are free, remember to book early for special events such as the Midwinter Dinner on June 18, this year being held at Doherty's Hadley's Hotel.

• Thank you to all contributors this issue, to Antarctic Tasmania for the calendars and Screen Tasmania for their programs. The new layout of Ice Breaker continues to develop and a limited amount of space for colour ads is now available. Increasing costs mean annual subscription rates will be \$28.00 from June 2005. Letters to the editor and suggestions are always welcome.

Anthea Wallhead

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Our new colour advertisements are featured inside the front and back pages.



I am very pleased to welcome the announcement by the Australian Government that it will provide funding for an intercontinental Antarctic airlink. I know that the local Antarctic community is as thrilled by this decision as I am. The announcement certainly reaffirms Hobart's role as an international Antarctic gateway.

In the May budget, the Australian Government committed \$46.3 million over the next four years to lease a long-range Bombardier Global Express (see below) intercontinental jet aircraft and provide additional resourcing for an Australian intercontinental airlink.

The service will be based in Hobart and will provide air passenger access to and from Antarctica in support of Australia's Antarctic program. It also has the potential to provide a surveillance platform for the protection of Australia's assets in the Southern Ocean.

Securing funding for the Australian Antarctic Airlink was a key policy action addressed in the Tasmanian Government's Antarctic, Sub-Antarctic and Southern Ocean Policy released in July 2004. A regular Hobart-Antarctic airlink has been a long-term objective of the local Antarctic sector and the recent announcement is the culmination of many years of cooperative work by Antarctic sector members. In the lead-up to the Australian Government's May Budget, the State Government and the Tasmanian Polar Network worked hard to lobby Canberra to provide funds for the airlink.

Full implementation of Australia's intercontinental airlink is important to the ongoing development of the state's Antarctic sector. The airlink will underpin Australia's Antarctic research efforts and stimulate growth in the Tasmanian Antarctic sector. The first trial flights are expected during the 2006-07 Austral summer and essential plant and equipment for the runway will be shipped to Antarctica during the 2005-06 summer operations.

There is already significant international interest in the capability of the Australian Antarctic Airlink. The provision of a regular Antarctic air service from Hobart to Casey Station will increase the number of scientists using our gateway and is likely to provide a powerful incentive to international Antarctic program operators to consider using Hobart as their preferred departure point into East Antarctica. The new airlink will allow the Antarctic sector to enhance the level of services offered to the French National Antarctic Program. It may also attract other countries to use Hobart as an Antarctic gateway and as a future supply base for their operations.

A series of industry briefings is planned by the Department for the local industry. I am sure the local Antarctic community will support the airlink's future operation and take full advantage of the economic opportunities offered by this service.

Lara Giddings
Minister for Economic Development





Without doubt the recent announcement of \$46.3 million in Federal Government funding for the Antarctic air-link is one of the most exciting events in Tasmania's rich polar history. The possible benefits and opportunities that will flow from this connection are vast, and will provide a launching-pad for great expansion and development in our State. It will also consolidate Tasmania as Australia's Antarctic capital.

It was a great pleasure to attend the announcement of the details of the funding package at the AAD on the morning following the Federal Budget. To see so many happy people gathered to celebrate the announcement was tremendous.

It was also gratifying that the Federal Minister, Senator Ian Campbell, flew down to Hobart to deliver the good news in person. Senator Campbell delivered a poignant speech acknowledging all those who have lobbied for many years to make this airlink a reality. And he recognised and paid particular tribute to the efforts and the vision of a number of key individuals, as well as the work of the State Government and the Polar Network.

There is no doubt this intercontinental air link will revolutionise Australia's Antarctic programme, and there will be many on-flow benefits and opportunities.

- Most notably:
- science and research will benefit greatly;
 - passenger and goods transport will increase;
 - local business (including manufacturers, service providers, building and construction, conference and accommodation facilities...) can now explore, and expand into, new fields;
 - our position as an international gateway to the Antarctic is enhanced.

And from all this, Tasmania's broad economic position advantages.

These opportunities at a local level must be strategically harnessed by the State Government in conjunction with the Polar Network, business and industry, and other interested parties.

What was once a vision, is now an exciting reality.

Will Hodgman
Shadow Minister for Antarctic Tasmania



PEG PUTT'S MESSAGE



Events in the first half of 2005 have confirmed the importance of Antarctica as an integral thread in the fabric of Tasmanian society, economy and environment. We've seen developments in climate change science, oceans management and the establishment of the Tasmanian airlink to Antarctica.

Tasmania's contribution to Antarctic science benefits the global community as Antarctica further establishes itself as a "hot spot" for scientific inquiry into climate change. I welcome the good news that the University of Tasmania is involved in a climate change study being undertaken by NASA and more than 40 scientists from 10 universities worldwide. Among other things the study will look at how climate change will affect nations' populations and economies.

The extent to which Tasmania's Parliament takes note of climate change and the developments in Antarctic science related to it will be crucial to the long-term sustainability of our society, economy and environment. The latest State of the Environment Report for Tasmania made several recommendations regarding the need for the state to respond to the "*vulnerability of coastal settlements and infrastructure to impacts arising from climate change*". The Greens of course are very much aware of the importance of Antarctica as a place for scientific inquiry into climate change and will continue to raise these issues in State Parliament.

The newly established airlink between Tasmania and Antarctica will open new opportunities for scientific observation, although we hope that it doesn't skew effort away from vital marine research. With these new opportunities come new responsibilities. Tasmania will be responsible for assuring that this new airlink operates in an ecologically sensitive manner. Careful attention should be paid to preventing fuel spills and to ensuring that the integrity of Antarctica's wilderness qualities is not compromised.

There have also been developments in the management of the vast Southern Ocean that connects Tasmania and Antarctica. Calls by Japan to hunt endangered humpback whales are ludicrous and should be rigidly opposed. The Australian Government should be lobbying Japan very heavily to prevent the slaughtering of these animals for any purposes; future generations will thank them for that.

I am also looking forward to the Antarctic Midwinter Festival that has become a unique cultural and social event for many Tasmanians [including my family]. The festival gives us a chance to celebrate not only our unique geographic proximity to Antarctica but also the countless Tasmanian stories of discovery and adventure from the icy continent. It is an especially great event for young Tasmanians, those who will be Tasmania's future Antarctic explorers and scientists.

Peg Putt, MHA
Tasmanian Greens Opposition Leader

CONTINUED SUPPORT FOR ALBATROSSES

This year's Big Bird Race began in May, with celebrities again sponsoring Tasmanian Shy Albatrosses on their 10,000 km migratory path across the Indian Ocean. The race is run by Ladbrokes and any income generated from betting on the first albatross to reach Durban, South Africa, is donated to BirdLife International's Save the Albatross Fund. The Conservation Foundation and scientists from the Tasmanian government ARE also involved in the race, and 17 birds are fitted with an electronic 'jockey' to monitor progress.

TPN CHAIRMAN'S MESSAGE



It's official – the inter-continental Airlink from Hobart to Casey is to happen with the funding announced in this month's Federal Budget.

Terrific!

Well done to everyone who has laboured long and persistently for the dream to become a reality.

Well done too to all our Elected Federal Representatives who have combined their efforts across Party Lines to help make it happen.

Well done and thanks to Minister Campbell for backing Hobart and pushing so hard.

Whilst this is truly a cause to celebrate, we shouldn't get too carried away with it as it is now for us as Tasmanians, and particularly the Polar Network and its Members to make it happen beyond the basic infrastructure to be put in for Australian Science.

We need to look to encourage other nations to use the Airlink and, when they do, we need to make sure we meet them en route through Hobart. We need to brief them fully on what we have here in Tasmania and how we are keen to support their efforts down south. We need to ensure they fully understand both our commitment and capabilities so that when they need help they turn to us – not the mainland nor necessarily their home country in the northern hemisphere. Remember, we are an island and have always 'done it here'. Our heritage is born of self-dependence and we think that way – that is a real strength now.

This might sound a bit 'grand' but it's the same tune the TPN has been singing for several years now. The difference is though, that whereas before we have had to include the Hobart based Airlink in the scenario, it's now soon to be a reality. We need to continue to believe in the dream and chase it even harder now.

The successful performance and safe return to Hobart of the CASA 212's in opening up the intra-continental Airlink in and around Antarctica last summer is very encouraging. The stories of these machines' performance and duties down south give reality and confidence to the feasibility of this part of the air transport dream. Linked with the jet service for the inter-continental part of the network, Australia will have achieved a terrific result which will surely entice other countries to use the service.

The Midwinter Festival is on again soon. This is rapidly becoming an event of note in the annual event calendar and one with which the TPN has been closely involved since its conception. I understand that Members have responded very well to advertising opportunities in the Hobart Mercury's Supplement and thank you all for this support. The Mercury Supplement is the key organ of the Midwinter Festival and is well read by both local citizens and visitors seeking Festival information. Please 'rug up' and join in the many events during the Festival week as well as encouraging your friends and neighbours to do likewise.

Another significant thing about to happen is the move of the CCAMLR Headquarters to new and suitably prestigious premises in Macquarie Street – the old Hutchins Building which is in the process of full restoration. I think that this magnificent old building exudes the importance which CCAMLR represents to Hobart and look forward to its opening in October 2005 when Hobart will again be host to the Annual Meetings of CCAMLR. I understand that there will be an opportunity for TPN members to inspect the newly restored building in September when CCAMLR will host an Open Day. Details will be sent to TPN Members very soon.

I note to Members that the 2006 COMNAP biennial meetings will be held in Hobart. This is a very big opportunity for us to showcase our state and capabilities to all countries working in Antarctica and the Southern Oceans. By then the Hobart – Casey intercontinental Airlink will be very close to reality and will represent a very real and dynamic focal point for our efforts. The TPN Executive is already working on the arrangements for COMNAP in 2006 and details will be progressively circulated to Members starting soon.

Bill Lawson.
TPN Chairman



Congratulations are extended to the Australian Antarctic Division on securing funding for the intercontinental Antarctic Airlink! What an exciting period of activity that has led to the developments we now see before us. The recent announcement by the Commonwealth Government in the *May 2005 Australian Budget* that funding has been allocated to Australian Antarctic Division to implement of the intercontinental Antarctic Airlink is welcome news. This marks an exciting milestone in the ongoing development of the Tasmanian Antarctic sector.

Concerted efforts, over many years by the State Government, the Tasmanian Polar Network and others in the Tasmanian Antarctic business community, have contributed to the allocation of this substantial Commonwealth Government funding. Together, we combined our strengths and: (1) actively lobbied the Commonwealth Government to secure Hobart as the departure point for the Australian Antarctic Airlink; and (2) built the case for Commonwealth funding to be allocated to this pivotal project. The Tasmanian Antarctic community has much to be optimistic about at this juncture.

In other developments, this summer Antarctic season will see two Australian Antarctic cruise ship companies, Aurora Expeditions and Orion Expeditions, using Hobart as a departure point for their Antarctic and Sub-Antarctic cruises to Macquarie Island, the Ross Sea and the vast, and rarely visited, East Antarctic region.

Mr Greg Mortimer from Aurora Expeditions recently visited Hobart to brief members of the Tasmanian Polar Network on the new tours his company will offer using the new 100 berth expedition vessel, *Mariana Svetaeva*. The vessel will undertake three voyages during the 2005/06 Antarctic season and is equipped with two helicopters to support this company's distinctive Antarctic adventure style cruises and land-based activities. Orion Expeditions is also two offering luxury expedition cruises to the Ross Sea via the Sub-Antarctic regions using the 106-berth expedition vessel, *Orion*.

Preparations for the Antarctic Midwinter Festival are proceeding smoothly under the direction of Festival Director, Mr David Laskey, and valuable support provided by the Antarctic Tasmania team. Many thanks are again due to all those Tasmanian institutions and members of the Antarctic community for dedicating their time, energy, resources and inspiration to showcase a remarkable range of festival events.

In a scoop for the Antarctic Midwinter Festival, the National Archives of Australia will screen 22 minutes of newly discovered film footage shot by famed photographer, Frank Hurley, during Douglas Mawson's *1911-14 Australasian Antarctic Expedition*. Most of this remarkable footage has never been seen by the public and includes rare footage of the expedition preparations on the Hobart waterfront.

This year's festival will run from 17 - 26 June 2005 and the program will be published in the *Sunday Tasmanian* on 5 June 2005. We all look forward to seeing you at this year's festival.

Ben Galbraith
General Manager

FOR INFORMATION ABOUT
ANTARCTIC MIDWINTER FESTIVAL EVENTS
17-26 JUNE 2005
www.antarctic-tasmania.info

MIDWINTER FESTIVAL REPORT

Antarctic Midwinter Festival kicks off the wintertime fun!

Hobart will once again come alive to the sights and sounds of Tasmania's premiere winter event, the Antarctic Midwinter Festival from June 17-26.

In its fifth year, the Festival provides Tasmanians and visitors alike with a unique insight into Tasmania's long and proud Antarctic history, as well as showcasing our vibrant contemporary connections with the Antarctic, sub-Antarctic and Southern Ocean region.

The Festival kicks off with The Longest Night Film Festival – the only film festival dedicated to presenting films from Polar Regions and extreme environments. Snuggle up at the State Cinema in North Hobart to enjoy these cinematic gems!

Notable Tasmanian raconteur Tim Bowden will once again play host to the Antarctic Midwinter Dinner, while as a prelude Dr Robin Burns will deliver the prestigious Phillip Law Lecture in the “olde worlde” charm and elegance of Hadley's Hotel Regency Room.

Witness rare archival footage shot by Frank Hurley at the National Archives of Australia of Mawson's 1911 Australasian Antarctic Expedition, which departed Hobart's Queens Wharf amongst much pomp and ceremony. Also look over a series of maps of the South Polar Region, hand-annotated by Douglas Mawson in preparation for the Expedition.

To get into the spirit, Hobart's world famous Salamanca Market will theme two special Salamanca “Midwinter” Markets during the Festival period on Saturday 18 & 25. Aside from all the usual Salamanca market attractions, the Midwinter Markets will feature Special Guests such as the TPN Mega Penguins, the Festival Band, ice carver extraordinaire Kenji Ogawa, award winning author Coral Tulloch, and Tasmanian explorer Eric Phillips, as well as snowman competitions for the kids!!

The Antarctic School Discovery Days (21 -25 June), features a range of Antarctic themed activities for Tasmanian school groups from the Australian Antarctic Division (AAD), Tasmanian Museum and Art Gallery (TMAG), CSIRO, Bureau of Meteorology (BoM), the University of Tasmania, and many others. (Bookings are essential)

For those that want to enjoy some gluhwein, shake off those winter blues and dance, the Salamanca Courtyard will come alive with a “cool” Solstice Party with Music and Fire on Saturday 18, featuring world music, funk, swing and jazz and then a fabulous fireshow next door in Salamanca Square.

And if funk is not your cup of tea, then the world renowned Tasmanian Symphony Orchestra (TSO) will perform a special Antarctic flavoured concert performance at the Federation Concert Hall on 22 June.

Popular crowd favourite, The Huskies Picnic at the Royal Tasmanian Botanical Gardens (RTBG) on 27 June is a full day event, with a very family friendly program featuring three live Husky demonstrations, ice carving by Kenji Ogawa, the Muttley Dog Troupe, displays from local breeders of Malamutes, Samoyeds and Akitas and the Taiko drummers banging out their big beats!

And in a special pre-Festival event on Saturday 11th June, developed in conjunction with AFL Southern Tasmania, the Tassie Devils will take on VFL rival Werribee at North Hobart Oval for the Midwinter Cup. A special Antarctic themed AusKick Clinic will precede the match for the kids, and there will be entertainment at half time too! So dust off the beanie and come on down to support the Tassie Devils at North Hobart Oval.

The Mercury will feature a special Midwinter Festival Supplement on Sunday 5 June that showcases the festival, while a Full Event Program and festival outline is available @ www.antarctic-tasmania.info.

Event Programs are also available from all Service Tasmania and Tasmanian Visitor Information Centres, the Hobart City Council, Tasmanian Museum and Art Gallery, and the Royal Tasmanian Botanical Gardens.



ARCTIC WOES

- According to a researcher at the University of Colorado, USA, the increase in the ozone hole over the Arctic last northern Spring was partly due to a strong polar stratospheric vortex wind, which caused nitrogen oxide gasses to thin the ozone layer.
- NASA scientists have found that because soot warms air, and soot deposits on ice absorb more sun, these factors speed up the ice-thaw in the Arctic. A third of the soot comes from Europe, N. America and Soviet countries, a third from South Asia and a third from the rest of the world.

MORE WHALES

Besides killing minke whales for 'scientific research purposes', the Japanese government intends to kill humpback and fin whales this year. In protest, Australian states and territories have signed a joint communiqué to the Federal Government calling for more action against the slaughter, particularly in Australian waters. Norway is also maintaining whaling activities, despite difficulties selling the whale meat due to lack of interest.

In contrast, the whale watching industry is estimated to benefit Australia by \$30 million a year, and a national review of guidelines governing human interaction with whales and dolphins is being urged by Environment Minister Ian Campbell. Whales are currently migrating north to breed and anyone in Tasmania sighting them can call 0427 WHALES.

OLDEST AND COLDEST

A 230-year-old painting of Antarctica was revealed beneath a NZ landscape when art restorers in London noticed thicker paint in some areas and X-rayed the canvas. Painted by William Hodges who accompanied Captain James Cook on HMS *Resolution's* voyage below the Antarctic Circle, it is believed that the picture of 2 icebergs were painted-over in NZ, either because of Hodges' shortage of materials, or because Antarctica was not a popular topic at the time.

PENGUIN VARIANCES

Humboldt penguins housed at Bremerhaven Zoo in Germany are being encouraged to breed with females imported from Sweden. The males were observed to be 'walking around in pairs, trying to mate with each other and sitting on stones as if they were eggs.' The zoo director's actions are an attempt to 'save a threatened species', but gay activists have objected and have been sending him threatening messages.

LONG-AWAITED FUNDS

Sections of the Australian Government's Environment Budget Overview 2005-06 cover funding for the Australian-Antarctic Airlink, protection of Australia's Southern Ocean waters and resources and additional funding for Southern Ocean surveillance.

ANTARCTIC AIRLINK

The \$46.3 million provided over the next four years will lease a long-range Bombardier Global Express aircraft to fly directly from Hobart to Casey and return. This aircraft is larger than the 16-seater Dassault Falcon 900EX originally considered for the intercontinental flight. It is expected that 20-30 flights will be made between October and late February, with possibly 200-400 people being transported every year.

Work on the airstrip near Casey Station will be carried out during the 2005-06 and 2006-07 seasons, with a trial flight expected in the latter year. Regular services are planned for 2007-08. Tenders for equipment and crews needed to extend the airstrip to 4 km in length are being advertised by the AAD now.

As Senator Campbell said in his Media Release of 11 May 2005: *'There will be tremendous opportunities for Tasmanian businesses to compete for the equipment and services required to develop and then operate the new Australian Antarctic air transport system.'*

With the introduction of inter- and intra-continental flights, scientists will have greater flexibility to plan and carry out Antarctic projects and the potential for shorter-term, but internationally co-operative activities is far greater than those possible by ship transport only. While ships will still play the major role in transporting heavy equipment and supplies to bases, more time for marine studies will also be available for onboard scientists. Positive interest from overseas polar institutes to use the Australian flights is growing, with international scientists being a potential, additional source of funds to maintain the service.

SOUTHERN OCEAN

The Australian Fisheries Management Authority will receive an additional \$10.1 million from 2006-09 to continue protecting of Australia's Exclusive Economic Zones (EEZ) in the Southern Ocean. In conjunction with the Australian Customs Service, which received \$120.9 million, AFMA and ASC's armed patrols will monitor the EEZ around Heard Island and McDonald Islands in particular, to deter illegal fishing and protect Australia's sustainable fishing industry.

COLD FUSION by ERIC PHILLIPS

The first of two chilling tales by Eric Phillips, polar adventurer, who with Peter Hilary and Jon Muir, walked to the South Pole via Titan Dome in 1999. (All text and photos courtesy Icetrek Expeditions.)

Like yesterday, the temperature hovered around thirty below - we could feel the cold edge of the Titan Dome. Any moisture not inside our bodies or a thermos froze almost instantly. Below minus fifty a freshly boiled jug of water thrown into the air freezes into a spray of ice dust before hitting the ground. As the Alaskans say, 'It's so cold you can piss and lean on it'. The world's coldest temperature, just under minus 91°C, was recorded at Vostok, Russia's research station high on the Antarctica plateau. If caught naked outside, your eyeballs freeze instantly, your skin is hard in seconds, and minutes later the cold will have penetrated your flesh and turned your heart into a lump of red ice, if it isn't already that way inclined. Don't go outside naked.

By the first break we were adorned in icicles and hoarfrost. Ice formed between all of our headgear and stuck to our skin, where it remained until the break, two hours hence. By constantly licking and smiling I could retard or free the build-up of ice under my nose. Our goggles became completely encrusted in ice, inside and out. Frozen breath hardens like steel and when it grates together, goggles against collar, it screeches like nails on a blackboard. A cough can be seen to freeze, suspended momentarily in mid air before falling like a stone to the ice. With a little imagination you can almost see the cough lying there on the ground.

We all struggled to see through our goggles - a translucent coating of rime had covered both sides of the lens. This made it difficult to navigate and we weaved across the ice like drunks. It was slightly better to follow behind, if you were close enough to see the diffused red hue of a sled cover.

Ten minutes into the last session my toes and fingers had numbed deeply, despite vigorous attention. We were moving slowly - Jon's goggles had fogged - and he found it difficult to hold a course. I hadn't warmed since the break and already the ice around my head was accreting into a single capsule through which I was finding it more and more difficult to breathe. A window the size of a match head was my only source of vision through frosted goggles and, located as it was in the bottom left corner, I craned my head to see through it. Glimpsing Jon's sled I raced forward, rasping breath freezing onto my mask of ice.

'Jon', I yelled.

The smear of red kept moving, and I continued, glad that my plea went unheard. Breathing became more laboured and I slowed to control it, but it was too late. The window was shuttered and my helmet of ice was complete. Blind, suffocating and numb with cold, I clutched at my goggles, broke the gasket of ice, and tore them from my face, gasping at the brittle air like a drowning man.

'Jon', I screamed.

He stopped and looked back.

'I can't see or breathe, and my fingers won't come back.'

Instinctively, Jon unclipped from his harness and ran back to me, unbuckling my waist-belt. 'We'll set up here', he shouted while unlashng the tent from his sled. Peter was right behind, and, upon hearing of my plight, scrambled to help Jon set up camp. I felt a bit awkward about all the attention, and helped them set up.

'Stop. Go and get your jacket on', Jon urged.

'I'll be okay Jon, I can help.'

'Eric, go and get your f***ing jacket.' Jon was yelling. He never yelled. By the time I attended to myself the tent was up and I was thrown inside and into my sleeping bag. Jon lit the stove, Peter finished off outside, and I lay there shivering. I was colder than I thought. We had passed 88° south and lay a little over two hundred kilometres from the South Pole.



COLD FUSION by ERIC PHILLIPS (cont.)

My team included the indefatigable Jon Muir, Everest climber turned Aussie bushman. He is a pillar of strength and has a tenacity that I've rarely seen amongst adventurers; the perfect polar partner. Also with us was Peter Hillary, son of Sir Edmund. Despite having also climbed Mt. Everest, he struggled with the mind games that polar journeying present. And if the mind says no, the body has little option but to follow.

We had begun our journey over two months earlier, from below the icy flanks of Mt. Erebus on Ross Island. Towing 200-kilogram sleds, we waved good-bye to the throng of well-wishers from Scott Base and McMurdo Station and headed south across the mammoth Ross Ice Shelf. From time to time, when the wind turned northerly, we launched our Quadrifoil kites and raced across the snow with effortless speed (see bottom photo). But these days were seldom - the wind generates high on the plateau and sweeps coastward, to where we had come.

Forty-two days later we stood below a mountain range – the Transantarctics - that erupted skyward to the polar plateau behind. Our route through it, via the un-trodden Shackleton Glacier, gave us an insight into the exploratory world of Shackleton, Scott and Amundsen, who travelled the wastes of Antarctica almost a century ago.

Our frozen pathway through the unclimbed peaks of the Queen Maud Range took us to the Titan Dome, an area of ice high on the Antarctic plateau that can harbour no life. At over 3000 metres above sea level, the air is thin and dry - and volatile. Blizzards locked us in our tiny tent for a total of ten days as we plied our route across the dome to the South Pole. To be lost in such a blizzard with no tent, without a wind mask, is death by suffocation, like breathing sand.

On Australia Day 1999, after eighty-four days on the ice, we arrived at the South Pole, to a rousing welcome from the two hundred staff that live and work at the station. The frostbite has healed, emotional scars have mended, memories have faded, and the lure of the ice, big skies and bitter cold pull me north. South Pole, North Pole - collect the set!



NORTHERN EXPOSURE by ERIC PHILLIPS

The second story by Eric Phillips, this time trekking north with Matt McFayden and Rob Porcaro.

The 2005 North Pole season proved to be markedly different from other years and offered it's own unique challenges, for guides, participants and private expeditions alike. As always, the bottom line never changes and Icetrek ensured that the experience would offer adventure, education, fun, safety and challenge. This we experienced in abundance.

Australian clients Matt McFadyen and Rob Porcaro joined me on the Antonov-74 flight on April 11 from Longyearbyen to Borneo, a temporary Russian drift station located at around 89°N. Borneo accommodates the 300-odd tourists that visit the extreme high Arctic throughout the short April season. Most visitors are day-trippers or over-nighters but a whole host of adventuring types grace the ice with grand plans of skydiving, dog sledding, model airplane flying, ballooning, photography, scuba diving, even an extreme ironing record. The ironing board drew a few bemused glances as it was unloaded from the helicopter at the North Pole.



After final preparations, and a test of Rob and Matt's sleeping bags during the chilly -31°C night, we bid the base farewell and headed north, skiing directly from Borneo. Both the guys had never been on skis before but their concerns at coping were quickly allayed. Matt and Rob are highly coordinated adventurers and looked as though they'd been a lifetime on skis; however a generally good surface throughout the trip (more like Antarctica) assisted their skill development and speed and Matt led for much of the afternoon. This expedition was to be a training run for their planned solo expeditions to the South Pole at the end of the year.

NORTHERN EXPOSURE by ERIC PHILLIPS (cont.)

The Arctic is distinctly different to the Antarctic. It is a frozen ocean that is subject to the forces of wind, currents and tides and its surface is often a maze of pressured rubble and open water. It's a veritable playground but it demands concentration and accurate decision-making. Consequences can be dire if mistakes are made in such an environment; frostbite is swift, hypothermia stealthy, heavy sleds destructive and polar bears hungry. Even this far north bears have been sighted. When I skied to the North Pole from Siberia in 2002 I sighted bear tracks not far from this point. We carried a gun and stayed vigilant.

The trip of almost 100km took seven days to complete. An incessant head wind hounded us for much of the trip, sending us drifting backwards much of the time. It takes a special type of person not to curse at the GPS for delivering a more southerly position than the previous night. But we were a committed bunch and pushed harder during our days of travel to make up for the lost ground. And with 24-hour daylight we could use as much of the day for travel as we needed.

A blizzard on our second-last day provided me with the perfect opportunity to immerse Matt and Rob into a situation they would be confronted by regularly in Antarctica. Their unspoken words of torment as we packed up camp were palpable but the increase in temperature typical during a blizzard warmed their spirit and we groped through the howling murk in a euphoric state. By early afternoon the sky cleared, the wind dropped and we set up camp surrounded by sparkling ice. As predicted, the temperature dropped into the -30's again and the following day, our last, would prove to be a cold and memorable one. With 21km to cover we hoped for a clean run but it wasn't to be. A huge band of pressure stopped us in the morning and open water thwarted us in the afternoon. Fortunately our kayak-cum-sleds proved their colours and we rafted across the inky abyss without incident. At 8pm, under a cold blue sky, faces begemmed by frost and icicles, we stood at 90 degrees north, my third time there. We were on top of the world, figuratively and literally and Matt's big Aussie flag provided the perfect backdrop for a hearty rendition of Advance Australia Fair.

But the pole giveth and the pole taketh away. A wind sprang up and took us and our merry camp 5km south overnight (no choice there, every direction is south from the North Pole!). A quick message by satellite phone to Borneo and the Mi8 chopper found us amongst a developing storm. Our timing impeccable, we packed quickly and climbed aboard to a toast of vodka with the crew. "Na Zdorovie".



Matt McFadyen
(left) and Eric
Phillips at the
North Pole.

For more information on guided expeditions to the North Pole visit www.icetrek.com or email enquiry@icetrek.com



I'd like to give you a brief overview of a couple of our research activities to give you just a taste of the breadth of work done within the CRC.

David Pointing, one of our PhD students recently won the opportunity to present his work at the Annual CRC Association Conference, which was held in Melbourne in May.

David talked about his work on clean, green alternative energy systems for Antarctica. The main conclusion of his research is that the communities of scientists working in Antarctica can show the world how it can be done with innovative, sustainable and affordable energy systems technologies. Indeed, steps have already been taken in this direction by the AAD through the installation of wind power generators at Mawson station.

David's research focused on the use of proven renewable energy technologies like wind and photovoltaic (solar) power, and the exciting but little-known application of hydrogen as a method of storing energy. When combined, these technologies have the potential to effectively replace the fossil fuels used by remote communities to run power stations and vehicles.

David has shown in his research that Antarctic communities could enjoy big cost savings and important environmental benefits by using renewable and hydrogen energy technologies. David also believes that Antarctic communities would also play a valuable proving ground for use of such technology in extreme environments, inspiring other communities in other remote and hostile regions (for instance, remote Australian communities) to consider similar energy systems. David's work is but one piece of evidence of the innovative and productive contributions made to Australian research by our bright young graduate students who will be the next generation of research high flyers.

The second piece of very interesting work I'd like to share comes from a recent voyage of the *Aurora Australis* involving the ACE CRC, CSIRO, the Australian Antarctic Division and the Australian Greenhouse Office. The researchers found that the deep waters of the Southern Ocean are cooler and less salty than they were 10 years ago.

Expedition leader Dr Steve Rintoul, leader of the ACE CRC Climate Variability and Change Program and also a participant in the CSIRO Wealth from Oceans Flagship, has said that he was surprised at the size and speed of the changes observed. Every station sampled in the deep basin between Antarctica and Australia – about 100 overall – revealed that the deep waters were cooler and less salty than they were 10 years ago.

Researchers used to think of the deepest layers of the ocean as being very stable in properties such as temperature and density. These new observations show, however, that these deep waters, largely derived around the periphery of Antarctica, are capable of relatively rapid and widespread change. This information is a big surprise and its causes remain unclear, but the explanation is sure to develop in a fascinating way.

Finally, I'd like to congratulate Dr Steve Rintoul, ACE CRC Program Leader and CSIRO researcher for his recent award of the Inaugural Georg Wust Prize for oceanography. The international award is given by the German Society of Marine Research and the international journal *Ocean Dynamics*. Dr Rintoul received the award for his research over many years that has contributed to a much deeper appreciation of the fundamental role the Southern Ocean plays in the Earth's climate system.

Together with colleagues and students, Dr Rintoul's recent research highlights include:

- A demonstration that Southern Ocean processes connect the upper and lower branches of the global ocean conveyor belt circulation, and so play a key part in the global ocean processes and global climate.
- Innovative use of a variety of observations from ships, moorings and satellites to measure the transport and variability of the world's largest ocean current, the Antarctic Circumpolar Current.
- Identification of a major source of cold, dense Antarctic Bottom Water south of Australia, which supplies oxygen and heat to the deepest layers of the ocean.
- New insights into how the Southern Ocean responds to changes in forcing by the atmosphere.
- Establishment of observation networks incorporating traditional and novel tools to monitor the Southern Ocean.

Professor Bruce Mapstone, CEO ACE CRC



SKI-JOY

The Nordic-style sport of skijoring (pronounced ski-jur and meaning ski-driving) is becoming popular in Canada's Northwest Territories. Skijoring is the art of skiing while being harnessed behind one or two huskies at speeds up to 30 km/h. Skiers require a harness for the dog(s), a secure bungee line, and a well-fitting skijor belt. For more information on competitive dog sports, see the International Federation of Sleddog Sports' website: www.sleddogsport.com. Perhaps another possibility for Tasmania's Midwinter Festival!

ANTARCTIC INPUT

One of the exhibitions held during Tasmania's '10 Days on the Island' was 'Looking South' at the Plimsoll Gallery. This showed various historical images of Antarctica interspersed and often contrasting with contemporary artists' interpretations.

FORUM DISCUSSIONS

A strategic planning forum to explore emerging opportunities within the Antarctic sector was held just prior to the last Tasmanian Polar Network meeting in March this year. A thorough breakdown of factors influencing this sector was prepared by Antarctic Tasmania, and TPN members attending were able to analyse and contribute to future plans for topics such as the Antarctic airlink, Tourism and the International Antarctic Institute.

2 OUT OF 10

Two of The Mercury's list of 'Tassie's Top 10 Inventions', published on May 3, 2005 belonged to the Antarctic and Southern Ocean sector - seabird ecologist Graham Robertson's modifications to long-lines to reduce seabirds deaths and Malcolm Wallhead and Associates' environmentally-friendly Igloo Satellite Cabins.

MORE TASMANIAN ACHIEVERS

- Steve Rintoul, a scientist with CSIRO Marine Research, has been awarded the Georg Wüst Prize by the German Society of Marine Research, for his studies of the Southern Ocean and its role in global climate.
- Harvey Marchant (AAD) has received this year's Royal Society of Tasmania's Medal for contributions to science and scientific publications.
- Bronwyn Kimber and Andy Wakefield wintered over on Macquarie Island last year and spent 50 weeks mapping the island's magnetism. They

used 4 seismometers to record earth tremors, including the earthquake between the island and Tasmania prior to Christmas and the Asian quake and tsunami on Boxing Day 2004.

OCEAN RESEARCH

Recent Southern Ocean research has revealed that deep waters are cooler and less salty than 10 years ago. Current-meters were positioned 4-5 kms below the surface, adjacent to the Kerguelen Plateau, to measure these changes, and further research will be undertaken to determine whether the results are indicative of climate changes through global warming or a natural climate cycle. Other ocean monitors currently in use are the free-floating robots called Argo floats.

HYDROGEN POWER

Information about AAD's hydrogen demonstration project is now available on AAD's website at www.aad.gov.au/default.asp?casid=16383. The Australian Greenhouse Office has given AAD half a million dollars to research the use of hydrogen generated by wind in Antarctica, both at Mawson base and a field camp on Bechervaise Island. Another source of information is an Adult Education course this winter, entitled 'Hydrogen, Energy and Intelligent car Technologies' at the University of Tasmania's Engineering Building in August 2005.

GIANT IGLOO

A community in Northwest Canada has built the largest igloo made of snow blocks ever recorded. Over 400 people stood inside and officials estimated there was room for over a hundred more. The largest ice structure recorded in the Guinness Book of Records to date is an ice hotel in Sweden, and residents of Puvirnituk hope their igloo is even larger.

PINGU DISCOVERED

A tiny lake, similar to a filled crater left by a meteorite, was studied by scientists last year on Baffin Island, northern Canada. The water-filled depression was created when a hill was formed by reservoirs of underground ice expanding, pushing upward to the surface, then melting, leaving a depression called a pingu by the Inuit. Pingus are rarely found in this crater-like shape. [Please contact IB's editor if you know the name used for these features in Antarctica.]

[Correction: An article on P. 15 in Ice Breaker No. 30 about the number of lives lost on Mt Erebus should have read 257, not 201.]

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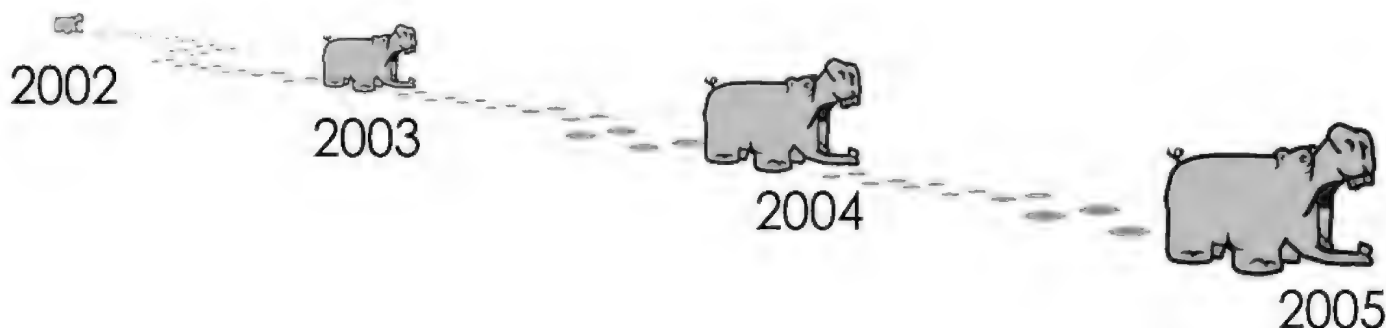
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BOOKS

Polar Castaways: The Ross Sea Party (1914-17) of Sir Ernest Shackleton by Richard McElrea and David Harrowfield. Published by Canterbury University Press. Price: \$49.95.

- With information sourced from 24 expeditioners' diaries and other reference material, this book describes events on the Ross Sea when 10 men were left ashore as *Aurora* was carried away from its winter moorings.

Antarctic Marine Protists edited by F.J. Scott and H.J. Marchant. Published by Australian Biological Resources Study and AAD. Price: \$95.00.

- Contains comprehensive descriptions and fascinating photographs of over 550 species of marine microbes. This book was launched by Sir Guy Green and Dr Tony Press at AAD on 30 March 2005. Photographs of some of the microscopic algae and protozoa were on display.

Frozen Oceans: The Floating World of Pack Ice by David N. Thomas. Published by Natural History Museum, London. Price: \$54.95.

- Describes the living communities and structure of ice.

The Big Why by Michael Winter. Published by Anansi. Price: \$34.

- A novel based in Newfoundland about an artist, his wife and a polar explorer.

MAGAZINES

EXPOnent – Showcasing Innovation, Science & Technology in Tasmania

Published by the Department of Economic Development, this new magazine provides information about a wide range of opportunities for Tasmanian inventors, researchers and investors. DED's Innovation, Science and Technology Unit is available to assist with grants to develop new ideas. To register to receive EXPOnent, visit www.development.tas.gov.au/innovate.html, call 1800 440 026 or email innovations@development.tas.gov.au

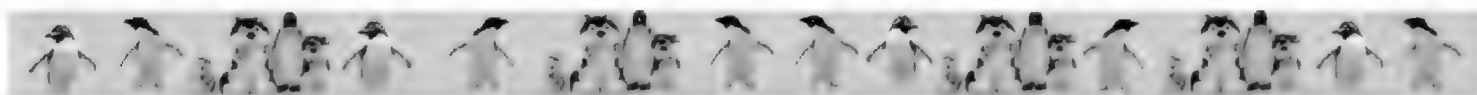
FILMS

The Longest Night Film Festival

State Theatre, North Hobart

June 17-26, 2005

For further information, see enclosed program or
www.antarctic-tasmania.info



CALLING ALL COOL COLLECTORS

The new Antarctic Gallery at the Tasmanian Museum and Art Gallery is currently being set up, and David Pemberton, Senior Curator, is interested to hear from anyone who has memorabilia from their own expeditions, which they would like to donate to the collections being assembled. Because of space limitations, 'the collection will be divided into those unique objects to be given the 'white glove' treatment and conserved to international museum standards, and those more valuable as education tools that can be handled and loaned with an active education public program.'

The hotline for those interested in contributing to the Antarctic and Southern Ocean Project (ASOP) is (03) 6211 4166.

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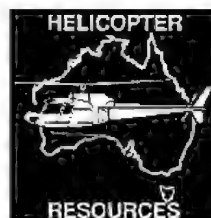
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POLAR CALENDAR




1	June	2005-	STIMULATE – Scientific & Technological Information Management in Universities
31	August	2005	and Libraries: an Active Training Environment. Brussels, Belgium. Contact: http://www.vub.ac.be/BIBLIO/itp/ .
6-17	June	2005	Antarctic Treaty Consultative Meeting, including Committee for Environmental Protection meetings. Stockholm, Sweden.
17	June	2005	Melbourne Midwinter Dinner. Power House Receptions, Melbourne, Victoria.
18	June	2005	ACT – Canberra Midwinter Dinner.
18-26	June	2005	ANTARCTIC MIDWINTER FESTIVAL. Hobart, Tasmania. Details on www.antarctic-tasmania.info
20-24	June	2005	International Whaling Commission meetings. Ulsan, Korea.
21-22	June	2005	Midwinter Dinners at ANARE Stations – Mawson, Casey, Davis, Macquarie Island.
?	June	2005	Midwinter Dinners in Townsville,(Q), S.Australia, W. Australia and Northern Territory (see ANARE Club state websites).
21	June	2005	Australian Geographic Lecture. Travels in Subantarctic islands by Rodney Russ. Further details on aadc-maps.aad.gov.au/aadc/events/future_events.cfm .
24	June	2005	Queensland Midwinter Dinner.
25	June	2005	NSW Midwinter Dinner.
1	July	2005	Tasmanian Polar Network Meeting. 11.00am-1.00pm. TCCI. Hobart, Tasmania.
7	July	2005	Australian Geographic lecture. ‘The Ice Maidens’ and Linda Beilharz - their walk to the South Pole. Melbourne, Victoria. Further details on Australian Antarctic Data Centre (aadc).
12-15	July	2005	COMNAP XVII meetings. Sofia, Bulgaria.
25-29	July	2005	VIII SCAR International Biology Symposium – Evolution and Biodiversity in Antarctica. Curitiba, Brazil. Contact: www.pucpr.br/scarbiologysymposium .
22-25	August	2005	Dynamic Planet 2005 – Monitoring and Understanding a Dynamic Planet with Geodetic and Oceanographic Tools. Cairns, Queensland. Contact: www.dynamicplanet2005.com .
5-9	September	2005	International Symposium on High-elevation Glaciers and Climate Records. Lanzhou, China. Contact: http://www.igsoc.org/symposia .
23-27	October	2005	First International Marine Protected Areas Congress. Geelong, Victoria. Contact: www.impacongress.org/ .
25	October	2005-	CCAMLR meetings. Hobart, Tasmania.
5	November	2005	
5-9	December	2005	International Symposium on Sea Ice. Dunedin, NZ. Contact: http://www.igsoc.org/symposia .

IN ADVANCE

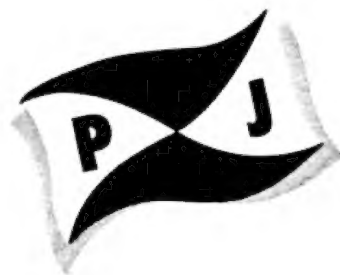
9-19 July 2006 SCAR/COMNAP XVIII Meetings. Hobart, Tasmania.
2007-2008 International Polar Year. For further details: www.ipy.org.



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SHIPPING & AIR CALENDAR



18	October	2005	L'ASTROLABE	Arrives Hobart.
20	October	2005	AURORA AUSTRALIS V1	On Hire at Hobart.
30	October	2005-	AURORA AUSTRALIS V1	Casey Station.
3	November	2005		
8	November	2005	KAP. KHLEBNIKOV V1.1	Departs Hobart for Macquarie Island.
10-18	November	2005	AURORA AUSTRALIS V1	Marine Science.
11-12	November	2005	KAP. KHLEBNIKOV V1.1	Macquarie Island.
25	November	2005	SPIRIT OF ENDERBY V2.1	Departs Bluff, NZ.
29	November	2005-	AURORA AUSTRALIS V1	Arrives Hobart, departs for Marine Science.
2	December	2005		
30	November	2005-	SPIRIT OF ENDERBY V2.1	Macquarie Island.
1	December	2005		
4	December	2005	KAP. KHLEBNIKOV V1.1	Arrives Lyttleton, NZ, departs for Macquarie Is.
4-10	December	2005	AURORA AUSTRALIS V2	Marine Science.
6	December	2005	L'ASTROLABE	Departs Hobart for Dumont D'Urville.
9	December	2005	MARINA SVETAeva V2.3	Arrives Hobart.
12	December	2005	SPIRIT OF ENDERBY V2.1	Arrives Dunedin, NZ.
12-13	December	2005	MARINA SVETAeva V2.3	Macquarie Island.
13-21	December	2005	L'ASTROLABE	Dumont D'Urville.
18-19	December	2005	SPIRIT OF ENDERBY V2.4	Macquarie Island.
16-22	December	2005	AURORA AUSTRALIS V2	Casey Station.
24-25	December	2005	KAP. KHLEBNIKOV V2.2	Macquarie Island.
27-29	December	2005	L'ASTROLABE	Arrives Hobart, departs for Dumont D'Urville.
29	December	2005	KAP. KHLEBNIKOV V2.5	Arrives Hobart.
30	December	2005	SPIRIT OF ENDERBY V2.4	Arrives Dunedin, NZ.
31	December	2005-	AURORA AUSTRALIS V2	Arrives Fremantle, W.A.
1-2	January	2006	KAP. KHLEBNIKOV V2.5	Macquarie Island.
2	January	2006	MARINA SVETAeva V2.3	Arrives Bluff, NZ.
4-8	January	2006	L'ASTROLABE	Dumont D'Urville.

AUSTRALIAN ANTARCTIC DIVISION TENDERS FOR RUNWAY CONSTRUCTION MACHINERY

17	June	2005	Tenders close
30	June	2005	Preferred suppliers advised
1	July	2005	Orders issued

All details on www.aad.gov.au and www.tenders.gov.au/federal/index/shtml

FLIGHT CALENDAR FOR GINGER AND GADGET

15	October	2005	Hobart to Casey	F1&2	Essential crew only.
5	November	2005	Casey to Davis	F3	Transfer Davis personnel/cargo (p/c) ex V1.
5	November	2005	Casey to Mawson	F4	Transfer Mawson ex V1p/c via Davis.
1	December	2005	Casey to Davis	F10	Transfer p/c to connect with V2.
4	December	2005	Davis to Mawson	F5	Transfer Mawson p/c ex V2.
4	December	2005	Mawson to Davis	F6	Transfer Mawson p/c to connect with V2.
8	December	2005	Davis to Casey	F7	Transfer Casey p/c ex V2.

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